

**ATTACHMENT A – SCOPE OF WORK SERVICES**  
**(NJDOT NBIS Bridge Inspection – State and County/Local)**  
**09/23/2024**

The CONSULTANT shall:

- A. Adhere to the Code of Federal Regulations, Title 23, Part 650, Subpart C - National Bridge Inspection Standards (NBIS), *Specifications for the National Bridge Inventory (SNBI)*, and *State of New Jersey Bridge Inspection Program Policy and Procedures*, dated June 6, 2024, with any subsequent revisions.
  - The initial SNBI inventory data will be pre-populated by converting the data from 1995 Coding Guide to 2022 SNBI using the FHWA Transition Tool. The Consultant shall refine this inventory data, i.e. verify/revise all clean and partial transition data items, and code all new data items.
  - The NJDOT State items needs to be coded as well.
  - The SNBI and State inventory data shall be updated within three (3) months of the inspection being completed. However, for inspections occurring near the end of the year, all data shall be inputted by January 31<sup>st</sup>.
- B. Contact the governing agencies or authorities prior to commencing any work under this Agreement. Obtain and provide the STATE with necessary letters and documents that grant approval for access, inspections of Structures, and other related activities.
- C. Familiarize themselves with all Structures prior to submitting the cost estimate. Break down all labor and expenses into the following categories: Total Salaries, Overhead, Fixed Fee, Reimbursable Expenses (Equipment, MOT, Diver, Special Testing, Railroad, Other), and Out-of-Pocket Expenses (Mileage, Subsistence, Printing, Other).
- D. Submit the project schedule to the STATE within ten (10) working days of receiving written authorization from the STATE to proceed with the project. The schedule will include the structure number, name, previous inspection date, recommended type and frequency of inspection, proposed inspection date, and proposed report submission date (with format report indicated) for each Structure listed in Appendix 1, which is attached hereto and incorporated into this Scope of Work (“Structures”). The schedule must be updated and submitted every six months (at end of June and December).
- E. Review previous inspection reports and applicable bridge files provided by the STATE, County or any other governing agency.
- F. Perform a thorough assessment of each Structure utilizing one or more of the following inspection types: Initial, Routine, Underwater, Nonredundant Steel Tension Member (NSTM), Special/Interim, In-Depth, Damage, Scour Monitoring, and Service.
- G. Perform the required inspection of each Structure using the procedures and techniques noted in the *Bridge Inspector's Reference Manual (BIRM)* to determine the following:

1. The physical and functional condition of the Structure utilizing observations and measurements. This may include special testing as required.
  2. The present live load capacity, or rating of the Structure, based on the current (2018) *AASHTO Manual for Bridge Evaluation, 3<sup>rd</sup> Edition*, and *NJDOT Highway Bridge Load Rating Manual*. Structures shall be load rated as soon as practical, but no later than 3 months after the Initial inspection or when a change is identified that warrants a re-rating such as, but not limited to, changes in condition, reconstruction, new construction, or changes in dead or live loads. Any decrease in the live load carrying capacity of a Structure that would require posting or a change in the existing posting should be brought, in writing, to the immediate attention of the STATE, County or any other governing agency.
  3. Any structural or safety related deficiency that requires immediate follow-up inspection or action to ensure public safety. All Critical Findings, as defined in the NBIS, must be reported immediately to the STATE, County or any other governing agency. The location and the redundancy of the member affected, and the extent and consequence of a deficiency should be considered when identifying a Critical Finding. Also, all priority repairs shall be identified in accordance with the Bridge Owner's procedure.
  4. The streambed profile of the waterway channel along each fascia limit and longitudinal centerline (required if a bridge has four or more lanes of traffic, or if the bridge is on an abnormal skew). Perform sufficient soundings at each substructure element to determine the relationship of the foundation to the streambed. Review previous soundings and note any significant changes in the streambed. Plot plan view and elevation views of the waterway channel. The plan view shall include the general configuration of the waterway channel and its relationship to the bridge opening, the direction of flow, the orientation of the substructure elements, significant hydraulic related features such as areas of sedimentation, debris or scour countermeasures, and sounding data in a tabular form. The elevation views shall include the general configuration of the substructure elements, the elevations of the substructure foundations (if available), the streambed profiles to show long term changes (oldest available, previous, and current), and the water elevation at the time of inspection.
  5. The vertical clearances above and below the Structure and the lateral clearances to the left and right below the Structure.
  6. The structural and geometric adequacy of the Structure. The adequacy of the safety features such as, but not limited to, roadside hardware, approach guide rails and end treatments. The horizontal and vertical alignment of the bridge approaches.
- H. Perform Initial or Routine inspection of each Structure. An Initial inspection of each new, replaced (including each stage of stage construction), rehabilitated, or temporary bridge

shall be performed as soon as practical, but within 3 months of the bridge opening to traffic.

- I. Perform Underwater inspection of the Structures in accordance with the *New Jersey Department of Transportation Underwater Inspection and Evaluation of New Jersey Bridges Guidelines Manual*, dated June 1994 with subsequent revisions. The Underwater inspection shall be performed by a qualified diver in accordance with the *State of New Jersey Bridge Inspection Program Policy and Procedures*, dated June 6, 2024. The inspection shall be from the mud line to the high-water line, inspecting all underwater components for deterioration including spalls, cracks, marine borer damage, rot, necking, and any other defects.

Prepare and submit a stand-alone Underwater inspection report, according to NJDOT standards, for each Structure. Act upon all comments submitted relative to all reviews of the Underwater inspection report. Address or include all comments and convert the final report into a PDF, with format and file naming according to the current version of the NJDOT *SDMS Contractors Specifications for Scanning, PDFing, and Electronic Deliverables*, and submit both electronically and in hard copy.

- J. Perform hands-on inspection of all Nonredundant Steel Tension Member (NSTM). The NSTM inspection shall utilize visual methods that may be supplemented by nondestructive testing. A very detailed visual hands-on inspection is the primary method of detecting cracks. This may require that critical areas be specially cleaned prior to the inspection and additional lighting and magnification be used. Other nondestructive methods may be used at the discretion of the Bridge Owner.
- K. Identify and perform Special/Interim inspections of the Structures in accordance with the *State of New Jersey Bridge Inspection Program Policy and Procedures*, dated June 6, 2024. Special/Interim inspections may be conducted in lieu of reduced frequency inspection when localized deficiencies exist.

Submit, within thirty (30) days of the completion of the Routine inspection of the Structures, a list of any additional Structures that may require Special/Interim inspections. The list will include a description of the structural component area requiring the Special/Interim inspection, structure number, name and recommended inspection interval.

The Special/Interim inspection report shall be submitted to the STATE, County or governing agency within thirty (30) days of the Special/Interim inspection date.

Perform only those Special/Interim inspections which can be accomplished within the time period for completion of work established by this Agreement and any Consultant Contract Modification hereto. Costs incurred for performing the Special/Interim inspections of Structures not previously identified shall be compensated as Additional Work/Extra Work through a Consultant Contract Modification.

- L. Perform In-Depth inspections, such as Pin & Hanger and In-Depth NSTM inspections, of the assigned Structures in accordance with their respective Scope of Work.
- M. Perform Mechanical & Electrical inspections of movable bridges in accordance with Movable Bridge Engineering Group's (MBEG) Scope of Work.
- N. Perform Damage and Scour Monitoring inspections as needed, in accordance with the *State of New Jersey Bridge Inspection Program Policy and Procedures*, dated June 6, 2024. These inspections are typically performed after extreme events and will be directed by the STATE. Costs incurred for performing the Damage or Scour Monitoring inspections of Structures not previously identified shall be compensated as Extra Work through a Consultant Contract Modification.
- O. Sufficiently verify "as-built" plans in the field to ensure that they accurately represent the Structure before using them in load capacity calculations. If plans are unavailable or incomplete, create new drawings of the Structures based on field measurements, using an 11" x 17" format. These drawings should include a plan, elevation, and typical cross-section at a scale of 3/16" = 1'-0". The dimensions shall include, but are not limited to, span lengths, railings, curbs/sidewalks, overall widths, spacing and sizes of non-encased beams and girders, and the available dimensions of encased beams and girders.
- P. Measure, probe, or otherwise make all efforts to determine the nature or cause of any abnormal movements, detected or suspected, of superstructure or substructure using conventional inspection procedures.
- Q. Provide either CAD or Microsoft Visio drawings, as directed by the State Project Manager, showing cross-section view, elevation views with streambed soundings and plan view for Structures over waterways, plan views with vertical and horizontal clearances for Structures over highways and/or railroads, and plan view/elevation view identifying the NSTM. Drawings are to be either 8-1/2" x 11" or 11" x 17" depending on the complexity of the drawing.
- R. Render a professional evaluation for each Structure in the form of a Bridge Survey Report, prepared either in CombIS or in accordance with the format directed by the STATE. If any Bridge Survey Report is not in accordance with the format directed by the State, the CONSULTANT shall rectify and resubmit the report.
- S. Submit all reports as Final (signed and sealed) after performing all quality checks necessary to ensure a complete and accurate report. Following procedures established by the STATE, submit to the STATE, County or any other governing agency with jurisdiction over the Structure, the electronic report (if required) and the required number of hard copies of the signed and sealed Bridge Survey Report at least two (2) months from the end of the duration of the Agreement as specified in Section III—Time, unless otherwise specified in Consultant Contract Modifications.

- T. Upload ALL working files and full plans sets into CombIS PRIOR to report submission to the Bridge Owner.
- U. Act upon all comments submitted relative to all reviews of the Bridge Survey Reports. Address or include all comments and update the Bridge Survey Reports (according to project requirements) within one (1) month from the receipt of any comments on the report. Submit signed and sealed hard copies of the Bridge Survey Reports as required for the specific project.
- V. Prepare and submit any electronic deliverables as required by the contract, following the methods specified at the time. These can include, but are not limited to, CD-ROMs and/or online storage (as directed) of PDF files and index files, working files, database files, complete load rating models, etc.
- W. Submit the Bridge Survey Report to the Bridge Owner, for Structures that require a reduced frequency for any of the inspection types, no later than one-half the number of months until the inspection is due (typically six months for an inspection due in one year), and the report must be finalized before the next inspection.
- X. If concurred by the STATE, arrange for and/or conduct work of a special nature in addition to the items described within this scope of work. Such work may include, but not necessarily be limited to, the following:
- Inspecting inaccessible areas by diving, rigging, excavating, confined space entry or removing portions of the substructure.
  - Coring, sampling, or testing.

The CONSULTANT will be compensated for special nature work approved by the STATE as Additional Work unless the STATE, in its sole discretion, determines that the work is Extra Work, in which case the CONSULTANT will be compensated in accordance with the terms of the Agreement.

- Y. Within nine (9) months of the date on which the STATE deems the inspection survey detailed above to have been completed, the STATE may order the CONSULTANT to expand the scope of work of this Project to include a second routine survey of any or all of the Structures. Unless otherwise agreed to by the STATE, all second routine survey work for NBIS Structures will be performed in accordance with the provisions of this Agreement. Payment for all work associated with the second routine survey will be made in accordance with the Extra Work provisions set forth in this Agreement. (Note: Currently, there is no intention to require a second routine inspection for Structures other than NBIS bridges).
- Z. The work pursuant to this Agreement shall be complete upon acceptance of all Bridge Survey Reports and submission of the deliverables. In no event shall the services required by this Agreement be deemed complete until the STATE has advised the CONSULTANT, pursuant to the terms of Paragraph Y of this Attachment A, whether the CONSULTANT must perform second routine survey work.